



APTIV

The Bioactivity Company

Synthesized Insect Pheromone Product List

World-Class R & D:

APTIV, Inc. has a world-class reputation for the synthesis and production of complex insect pheromones. APTIV has developed new pathways for these compounds focused on specific targeted insects. All compounds are produced through a high purity synthesis process and have been validated through extensive field-testing.

To Order Call 877-244-9610

Specialty Orders:

APTIV can provide high purity pheromone and kairomone compounds to meet your specific requirements. Special product order requests require identification of compound purity and quantity needed. Quotation of price and delivery provided promptly.

For Quotes Call 877-244-9610

Monitoring Lures Available:

Commercial monitoring lures are available for listed insects. APTIV can design and formulate new experimental lures with a wide range of release rates and field longevity for biological experimentation. Please call for quote

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Current Product List:

The list is organized into three parts:

- A:** Common and scientific name of targeted insect with corresponding compound(s)
- B:** Products listed alphabetically by compound name with corresponding insect(s)
- C:** Chemical structures of selected synthesized compounds

A. Insects by Common and Latin Names:

Striped Ambrosia Beetle, *Trypodendron lineatum*

Lineatin, [65035-34-9]

(+/-)-3,3,7-Trimethyl-2,9-dioxytricyclo[3.3.1.0^{4,7}]nonane

Brazilian Apple Leafroller, *Bonagota cranaodes*

(3E,5Z)-3,5-Tetradecadienyl acetate, [61360-85-8]

Autumn Gum Moth, *Mnesampela privata*

(3Z,6Z,9Z)-3,6,9-Nonadecatriene, [89353-62-8]

California Red Scale, *Aonidiella aurantii*

3-Methyl-6-iso-propenyl-9-decenyl acetate, [64309-03-1]

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A. Insects by Common and Latin Names:

Carpet Beetle, *Anthrenus verbasci*

(E)-5-Undecenoic acid, [62472-76-8]

(Z)-5-Undecenoic acid, [67270-85-3]

Carpenterworm, *Prionoxystus robiniae*

(3Z,5E)-3,5-Tetradecadienyl acetate, [61360-84-7]

Cigarette Beetle, *Lasioderma serricornis*

Serricornin, [72522-40-8]

(4S,6S,7S)-4,6-Dimethyl-7-hydroxynona-3-one

Citrus Leafminer, *Phyllocnistis citrella*

(7Z,11Z,13E)-7,11,13-Hexadecatrienal, [71317-73-2]

(7Z,11Z)-7,11-Hexadecadienal, [96833-53-3]

Citrus Mealybug, *Planococcus citri*

(1R-cis)-(+)-2,2-Dimethyl-3-isopropenylcyclobutanemethanol acetate, [28465-10-3]

Confused Flour Beetle, *Tribolium confusum*

Tribolure, [75983-36-7]

4,8-Dimethyldecanal

Cotton Boll Weevil, *Anthonomus grandis*

Grandlure I, [26532-22-9]

Grandisol, (+)-cis-2-Isopropenyl-methyl-cyclobutaneethanol,

Grandlure II, [41370-29-0]

(Z)-3,3-Dimethyl- $\Delta^{1,\alpha}$ -cyclohexaneethanol

Grandlure III, [26532-24-1]

(Z)-3,3-Dimethyl- $\Delta^{1,\alpha}$ -cyclohexaneacetaldehyde

Grandlure IV, [26532-25-2]

(E)-3,3-Dimethyl- $\Delta^{1,\alpha}$ -cyclohexaneacetaldehyde

Cowpea Weevil, *Callosobruchus maculatus*

3-Methyleneheptanoic acid, [84817-84-5]

(Z)-3-Methyl-3-heptenoic acid, [177024-58-7]

(E)-3-Methyl-3-heptenoic acid, [186708-19-0]

(Z)-3-Methyl-2-heptenoic acid, [133155-97-2]

(E)-3-Methyl-2-heptenoic acid, [30801-90-2]

Date Palm Weevil, *Rhynchophorus ferrugineus*

4-Methyl-5-nonanol, [152045-16-4]

Douglas Fir Beetle, *Dendroctonus pseudotsugae*

(+/-)-Frontalin, [60478-96-8]

MCH, [1193-18-6]

3-Methyl-2-cyclohexen-1-one

Suedenol, [21378-21-2]

3-Methyl-2-cyclohexen-1-ol

Eastern Tent Caterpillar, *Malacosoma americanum*

(5E,7Z)-5,7-Dodecadienal, [75539-65-0]

(5E,7Z)-5,7-Dodecadien-1-ol, [71510-51-5]

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A. Insects by Common and Latin Names:

- False Codling Moth**, *Cryptophlebia leucotreta*
(Z)-7-Dodecadien-1-yl acetate, [16677-06-8]
- Fir Coneworm**, *Dioryctria abietella*
(3Z,6Z,9Z,12Z,15Z)-3,6,9,12,15-Pentacosapentaene, [854201-96-0]
- German Cockroach**, *Blattella germanica*
Blattelaquinone, [849762-24-9]
Gentisyl quinone isovalerate
- Gypsy Moth**, *Lymantria dispar*
(+)-Disparlure, [35898-62-5]
cis-(7R,8S)-7,8-Epoxy-2-methyloctadecane
- Horse Chestnut Leafminer**, *Cameraria ohridella*
(8E,10Z)-8,10-Tetradecadienal, [247167-79-9]
- Legume pod borer**, *Maruca vitrata*
(10E,12E)-10,12-Hexadecadienal, [69977-24-8]
(E)-10-Hexadecenal, [76298-30-7]
- Light Brown Apple Moth**, *Epiphyas postvittana*
(9E,11E)-9,11-Tetradecadienyl acetate, [30562-09-5]
- Macadamia Nut Borer**, *Cryptophlebia ombrodelta*
(Z)-8-Dodecenyl acetate, [28079-04-1]
(E)-8-Dodecenyl acetate, [38363-29-0]
- Mediterranean Fruit Fly**, *Ceratitis capitata*
Ceralure B1, [119164-09-9]
cis-5-iodo-*trans*-2-methyl-1-cyclohexan-1-carboxylate
Enriched Ginger Oil [EGO]
- Mountain Pine Beetle**, *Dendroctonus ponderosae*
(+/-)-Frontalin, [60478-96-8]
- Nantucket Pine Tip Moth**, *Rhyacionia frustrana*
(9E,11)-9,11-Dodecadienyl acetate, [50767-78-7]
- Old House Borer (Cerambycid Beetle)**, *Hylotrupes bajulus*
(+/-)-3-Hydroxy-2-hexanone, [54073-43-7]
- Orange tortrix**, *Argyrotaenia citrana*
(Z)-11-Tetradecenal, [35237-64-0]
- Pine Shoot Beetle**, *Tomicus piniperda*
trans-Verbenol (>99.9% purity), [1845-30-3]
- Plum Curculio**, *Conotrachelus nenuphar*
Grandisoic Acid, [29578-30-1]

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A. Insects by Common and Latin Names:

- Potato Tuberworm**, *Phthorimaea operculella*
PTM-I, [57981-60-9]
(4E,7Z)-4,7-Tridecadienyl acetate
PTM-II, [61188-11-2]
(4E,7Z,10Z)-4,7,10-Tridecatrienyl acetate
- Red Flour Beetle**, *Tribolium castaneum*
Tribolure, [75983-36-7]
4,8-Dimethyldecanal
- Rhinoceros beetle**, *Oryctes rhinoceros*
Ethyl 4-Methyl octanoate, [56196-53-3]
Octanoic acid, [124-07-2]
- San Jose Scale**, *Quadraspidiotus perniciosus*
7-Methyl-3-methylene-7-octenyl propanoate, [73214-63-8]
- Southern Pine Beetle**, *Dendroctonus frontalis*
(+/-)-Frontalin, [60478-96-8]
- Spruce Beetle**, *Dendroctonus rufipennis*
1-Methyl-2-cyclohexen-1-ol, [23758-27-2]
MCOL
(+/-)-Frontalin, [60478-96-8]
- Spruce Budworm**, *Choristoneura fumiferana*
(E)-11-Tetradecadienal, [23192-82-7]
- Tobacco cutworm or Common Cutworm**, *Spodoptera litura*
(9Z,11E)-9,11-Tetradecadienyl acetate, [50767-79-8]
- Tomato Leafminer**, *Scrobipalpus absoluta*
Tuta pheromone [163041-94-9]
(3E,8Z,11Z)-3,8,11-Tetradecatrienyl acetate
- Vine Mealybug**, *Planococcus ficus*
Lavandulyl senecioate, racemic, [23960-07-8]
2-Isopropenyl-5-methyl-4-hexenyl-3,3-dimethylacryloate
- Webbing Clothes Moth**, *Tineola bisselliella*
Koiganal I, [51534-37-3]
(E)-2-Octadecenal
Koiganal II, [99577-57-8]
(2E,13Z)-2,13-Octadecadienal
Koiganal III, [58594-45-9]
(Z)-13-Octadecenal
- Western Pine Beetle**, *Dendroctonus brevicomis*
(+/-)-Frontalin, [60478-96-8]
exo-Brevicomin, [60018-04-4]
- Western Balsam Bark Beetle**, *Dryocetes confusus*
exo-Brevicomin, [60018-04-4]

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B. Chemical Name – CAS Registry Number – Insect Names:

exo-Brevicommin, [60018-04-4]

Western Pine Beetle, Western Balsam Bark Beetle

Ceralure B1, [119164-09-9]

cis-5-iodo-*trans*-2-methyl-1-cyclohexan-1-carboxylate

Mediterranean Fruit Fly

4,8-Dimethyldecanal, [75983-36-7]

Red Flour Beetle, Confused Flour Beetle

(1R-*cis*)-(+) -2,2-Dimethyl-3-isopropenylcyclobutanemethanol acetate, [28465-10-3]

Citrus Mealybug

(4S, 6S,7S)-4,6-Dimethyl-7-hydroxynona-3-one, [72522-40-8], Serricornin

Cigarette Beetle

(+) -Disparlure, [35898-62-5], *cis*-(7R,8S)-7,8-Epoxy-2-methyloctadecane

Gypsy Moth

(5E,7Z)-5,7-Dodecadienal, [75539-65-0]

(5E,7Z)-5,7-Dodecadien-1-ol, [71510-51-5]

Eastern Tent Caterpillar

(9E,11E)-9,11-Dodecadienyl acetate, [50767-78-7]

Nantuket Pine Shoot Tip Moth

(Z)-7-Dodecadienyl acetate, [16677-06-8]

False Codling Moth

(E)-8-Dodecenyl acetate, [38363-29-0]

(Z)-8-Dodecenyl acetate, [28079-04-1]

Macademia Nut Borer

Ethyl 4-Methyl-octanoate, [56196-53-3]

Rhinoceros Beetle, Oryctes

(+/-)-Frontalin, [60478-96-8]

Southern Pine Beetle, Douglas Fir Beetle, Spruce Beetle

Gentisyl quinone isovalerate, [849762-24-9], Blattelaquinone

German Cockroach

Grandlure I, [26532-22-9], Grandisol, (+)-*cis*-2-Isopropenyl-methyl-cyclobutaneethanol

Grandlure II, [41370-29-0], (Z)-3,3-Dimethyl- $\Delta^{1,\alpha}$ -cyclohexaneethanol

Grandlure III, [26532-24-1], (Z)-3,3-Dimethyl- $\Delta^{1,\alpha}$ -cyclohexaneacetaldehyde

Grandlure IV, [26532-25-2], (E)-3,3-Dimethyl- $\Delta^{1,\alpha}$ -cyclohexaneacetaldehyde

Cotton Boll Weevil

Grandisoic Acid, [29578-30-1]

Plum Curculio



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B. Chemical Name – CAS Registry Number – Insect Names:

(7Z,11Z,13E)-7,11,13-Hexadecatrienal, [71317-73-2]

(11Z,13E)-11,13-Hexadecadienal, [96833-53-3]

Citrus Leafminer

(10E,12E)-10,12-Hexadecadienal, [69977-24-8]

(E)-10-Hexadecenal, [76298-30-7]

Legume podborer

(+/-)-3-Hydroxy-2-hexanone, [54073-43-7]

Old House Beetle

2-Isopropenyl-5-methyl-4-hexenyl 3,3-dimethylacrylate, [23960-07-8], Lavandulyl seneciolate, racemic

Vine Mealybug

Lineatin, [65035-34-9], (+/-)-3,3,7-trimethyl-2,9-dioxatricyclo[3.3.1.0^{4,7}]nonane

Ambrosia Beetle

1-Methyl-2-cyclohexen-1-ol, [23758-27-2], MCOL

Spruce Beetle

3-Methyl-2-cyclohexan-1-one, [1193-18-6], MCH

Douglas Fir Beetle anti-aggregation pheromone

3-Methyl-6-iso-propenyl-9-decenyl acetate, [64309-03-1]

California Red Scale

7-Methyl-3-methylene-7-octenylpropanoate, [73214-63-8]

San Jose Scale

4-Methyl-5-nonanol, [152045-16-4]

Date Palm Weevil

(3Z,6Z,9Z)-3,6,9-Nonadecatriene, [89353-62-8]

Autumn Gum Moth

(E)-2-Octadecenal, [51534-37-3], Koiganal I

(2E, 13Z)-2,13-Octadecadienal, [99577-57-8], Koiganal II

(Z)-13-Octadecenal, [58594-45-9], Koiganal III

Webbing Clothes Moth

Octanoic acid, [124-07-2]

Rhinoceros Beetle

3-Methyleneheptanoic acid, [84817-84-5]

(Z)-3-Methyl-3-heptenoic acid, [177024-58-7]

(E)-3-Methyl-3-heptenoic acid, [186708-19-0]

(Z)-3-Methyl-2-heptenoic acid, [133155-97-2]

(E)-3-Methyl-2-heptenoic acid, [30801-90-2]

Cowpea Weevil



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B. Chemical Name – CAS Registry Number – Insect Names:

(3Z,6Z,9Z,12Z,15Z)-3,6,9,12,15-Pentacosapentaene, [854201-96-0]
Fir Coneworm Moth

(3E,5Z)-3,5-Tetradecadienyl acetate, [61360-85-8]
Apple Leafroller

(9E,11E)-9,11-Tetradecadienyl acetate, [30562-09-5]
Common Cutworm, Tobacco Cutworm, Light Brown Apple Moth

(8E,10Z)-8,10-Tetradecadienal, [247167-79-9]
Horse Chestnut Leafminer

(3Z,5E)-3,5-Tetradecadienyl acetate, [61360-84-7]
Carpenterworm

(3E,8Z,11Z)-3,8,11-Tetradecatrienyl acetate, [163041-94-9]
Tomato Leafminer (Tuta)

(E)-11-Tetradecenal, [23192-82-7]
Spruce Budworm

(Z)-11-Tetradecenal, [35237-64-0]
Orange Tortrix, Obliquebanded Leafroller, Spruce Budworm

(4E,7Z)-4,7-Tridecadienyl acetate, [57981-60-9], PTM-I
(4E,7Z,10Z)-4,7,10-Tridecatrienyl acetate, [61188-11-2], PTM-II
Potato Tuberworm

(E)-5-Undecenoic acid, [62472-76-8]
(Z)-5-Undecenoic acid, [67270-85-3]
Carpet Beetle

trans-Verbenol, [1845-30-3] (>99.9% purity)
Pine Shoot Beetle

